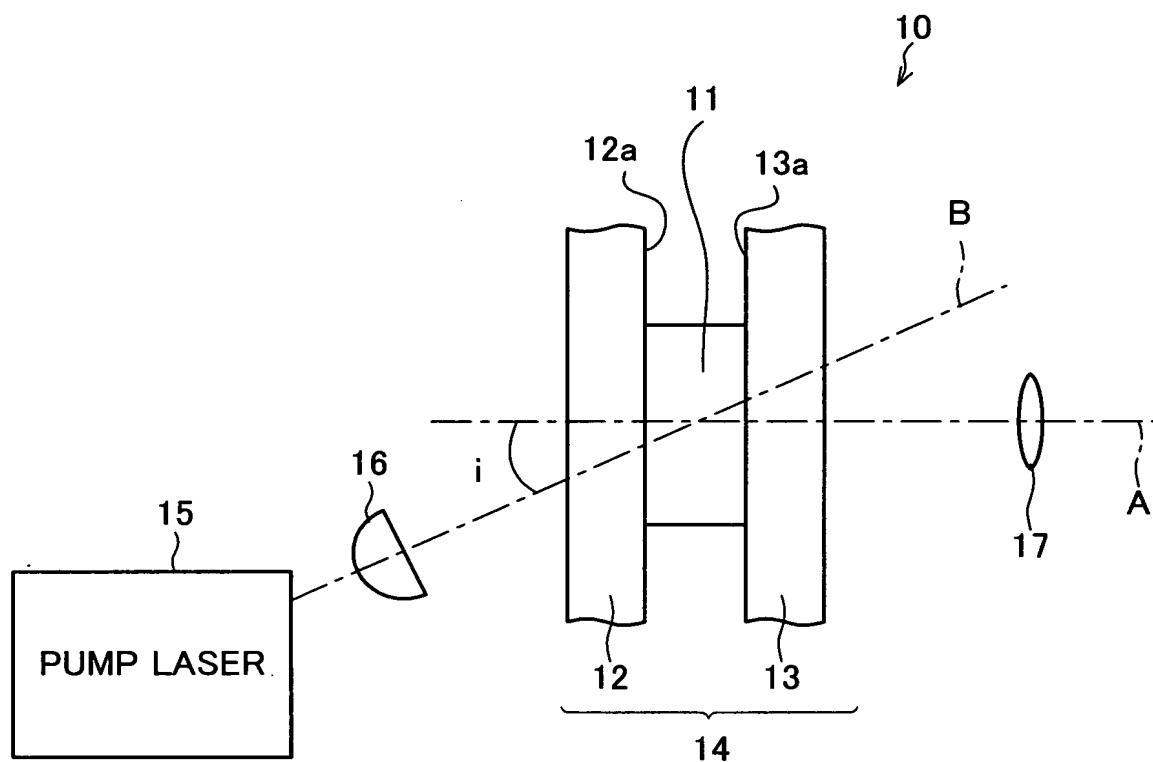
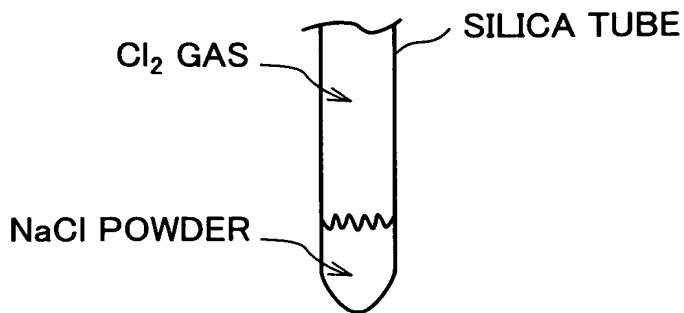


F I G. 1

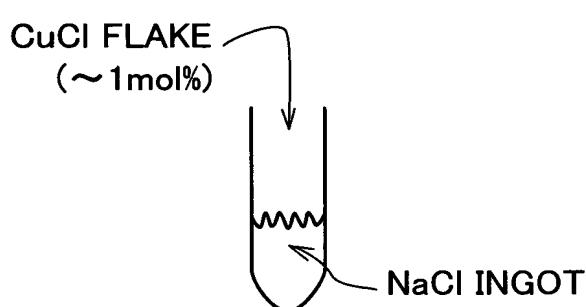


2 / 1 6

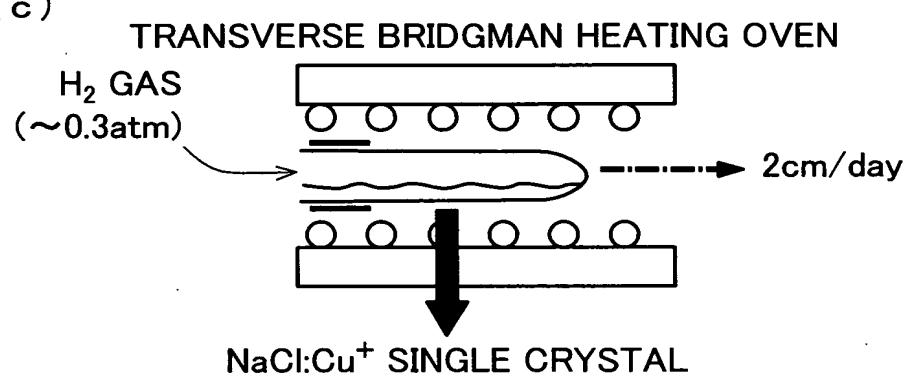
F I G. 2 (a)



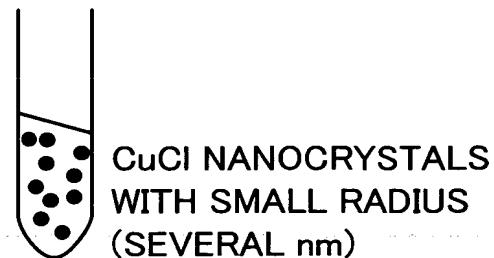
F I G. 2 (b)



F I G. 2 (c)



F I G. 2 (d)



F I G. 2 (e)

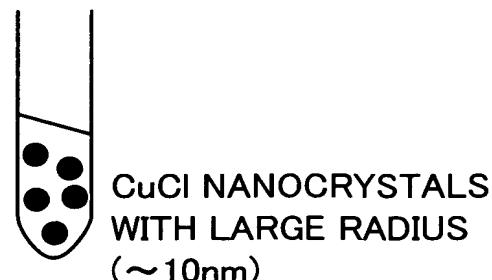
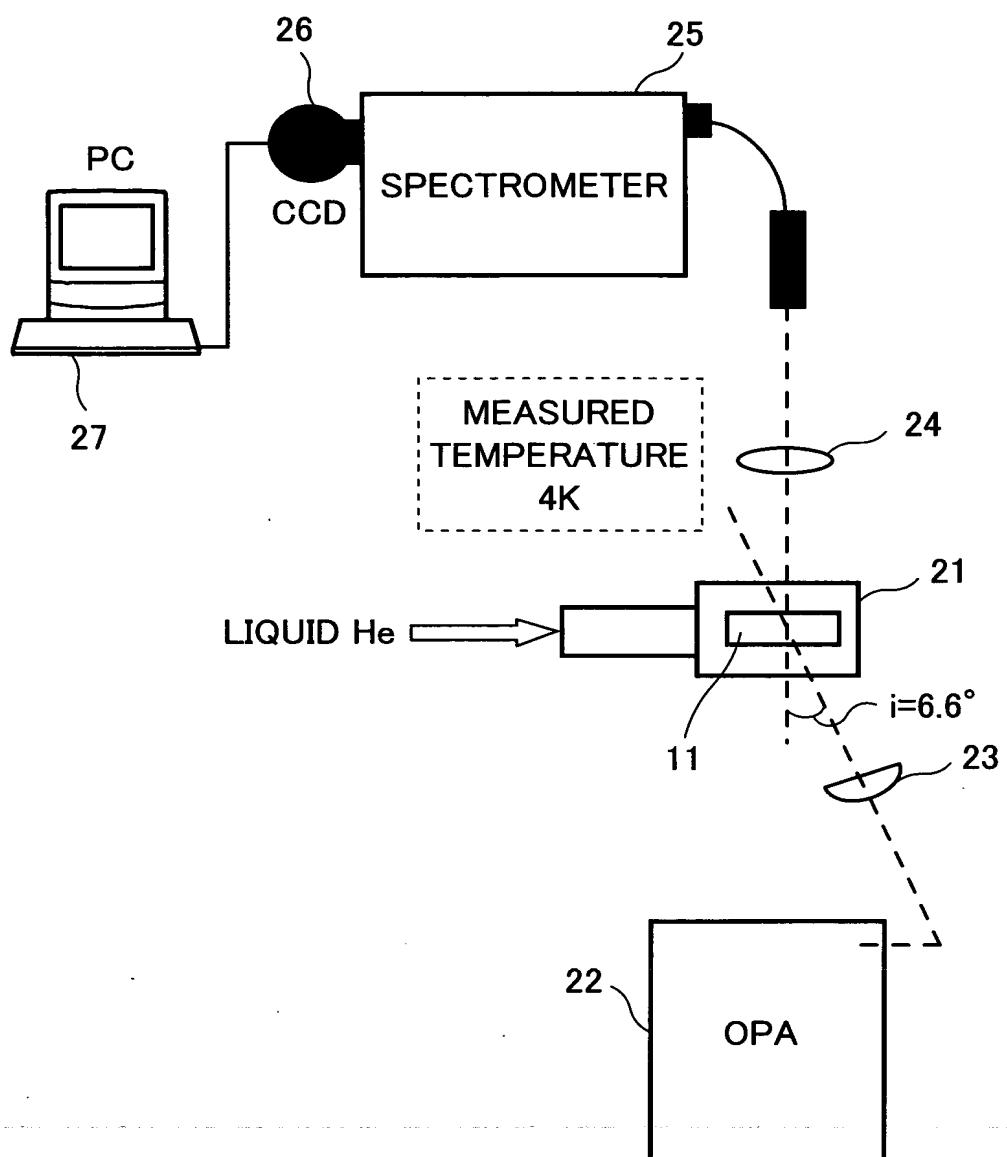
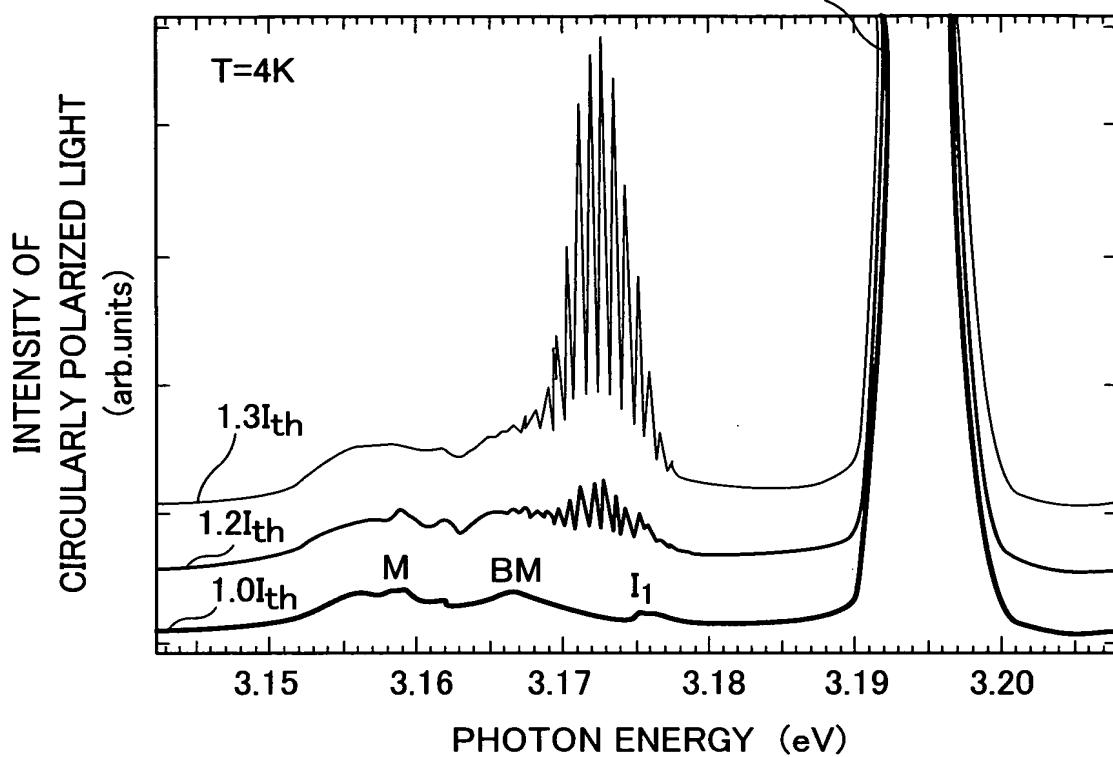


FIG. 3

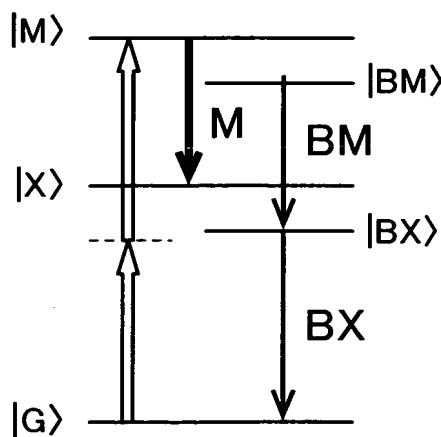


F I G. 4

EXCITATION LASER LIGHT
3.1950eV

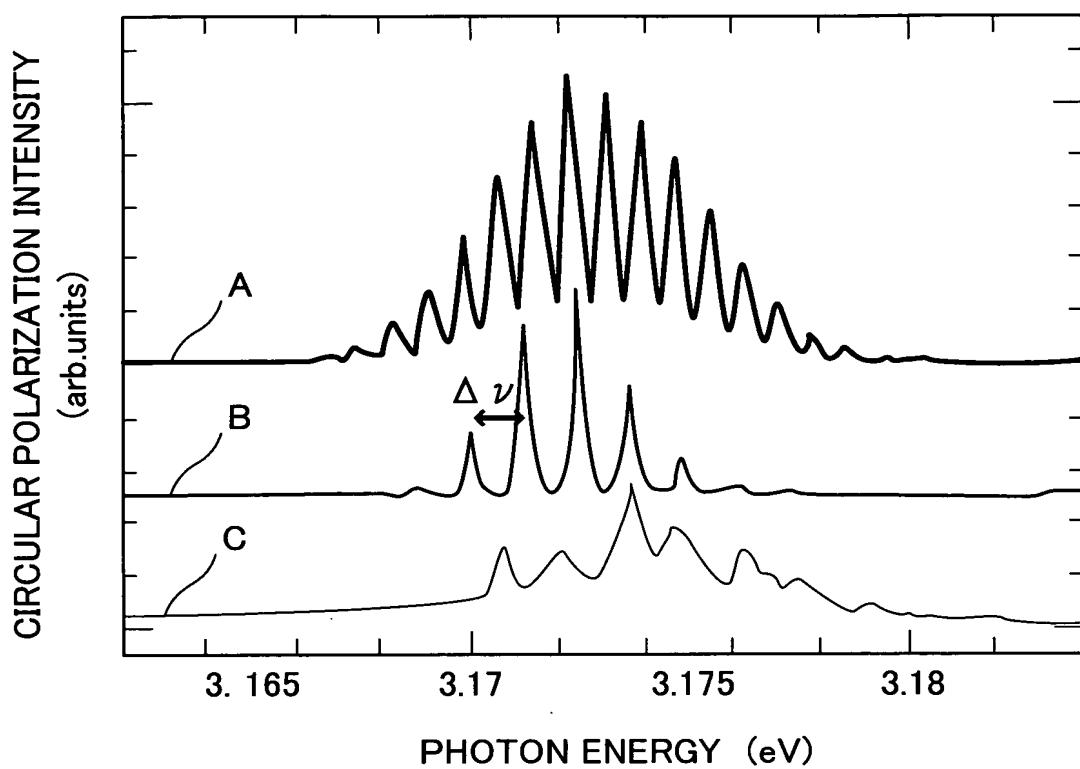


F I G. 5



| | |
|----|-------------------|
| M | : BIEXCITON |
| BM | : BOUND BIEXCITON |
| X | : EXCITON |
| BX | : BOUND EXCITON |

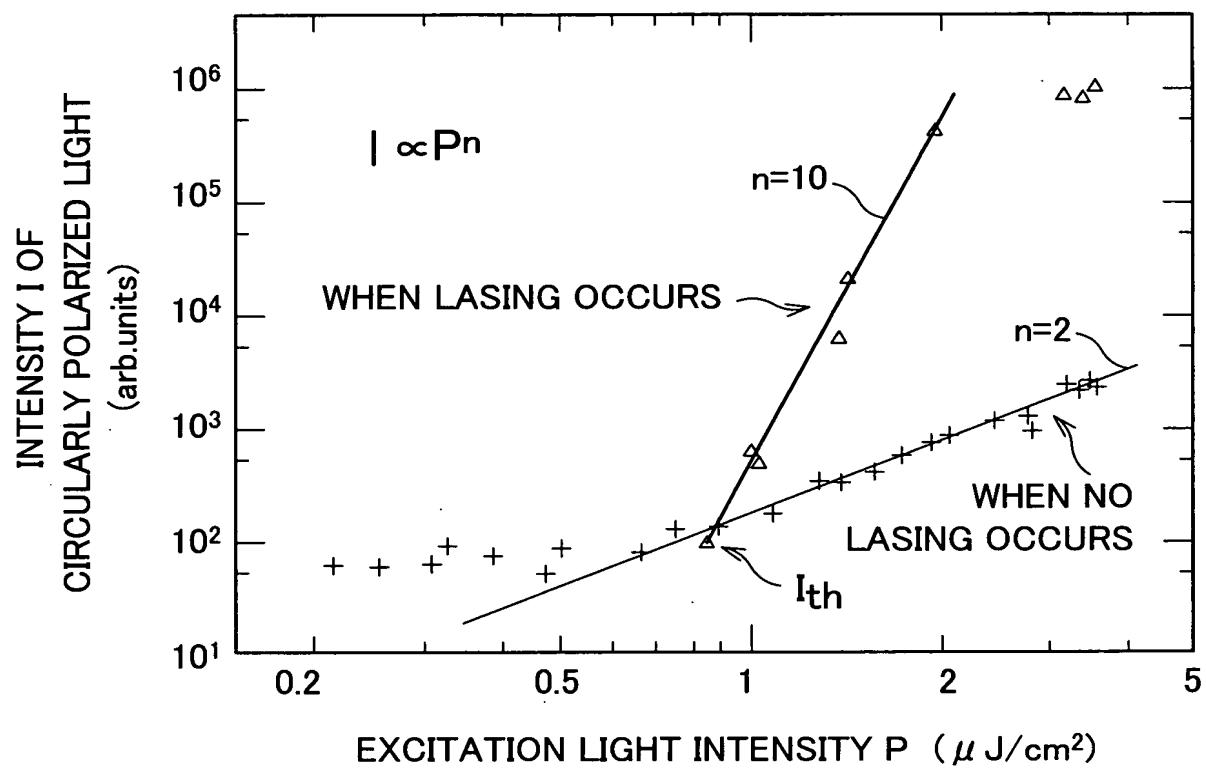
F I G. 6



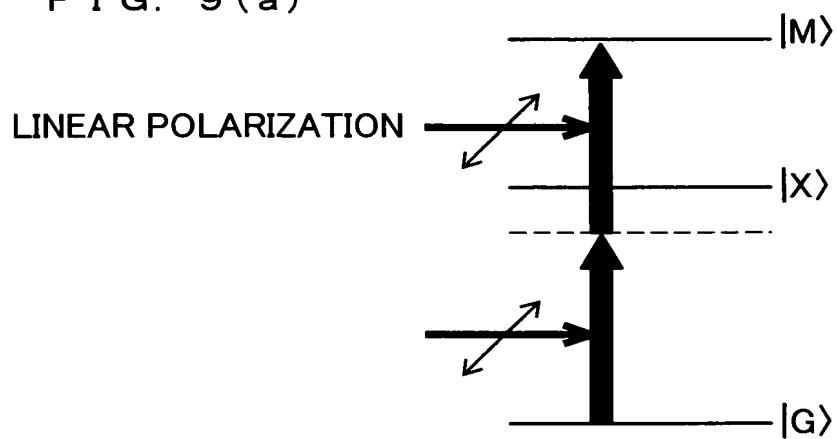
F I G. 7

| SAMPLE | MODE DISTANCE $\Delta \nu$ | CALCULATED CRYSTAL THICKNESS(mm) | ACTUALLY MEASURED CRYSTAL THICKNESS(mm) |
|--------|---------------------------------------|--|--|
| A | $1.980 \times 10^{11} \text{ s}^{-1}$ | 0.48 | 0.46 |
| B | $2.942 \times 10^{11} \text{ s}^{-1}$ | 0.32 | 0.30 |
| C | $3.215 \times 10^{11} \text{ s}^{-1}$ | 0.29 | 0.27 |

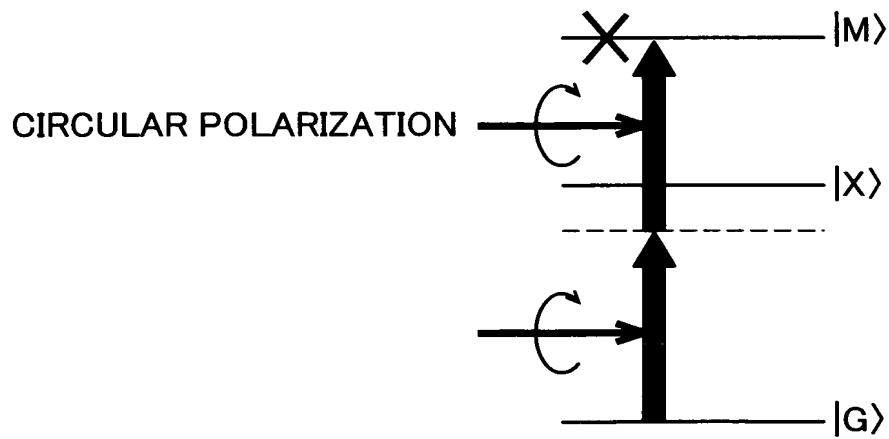
F I G. 8



F I G. 9 (a)



F I G. 9 (b)



F I G. 1 0

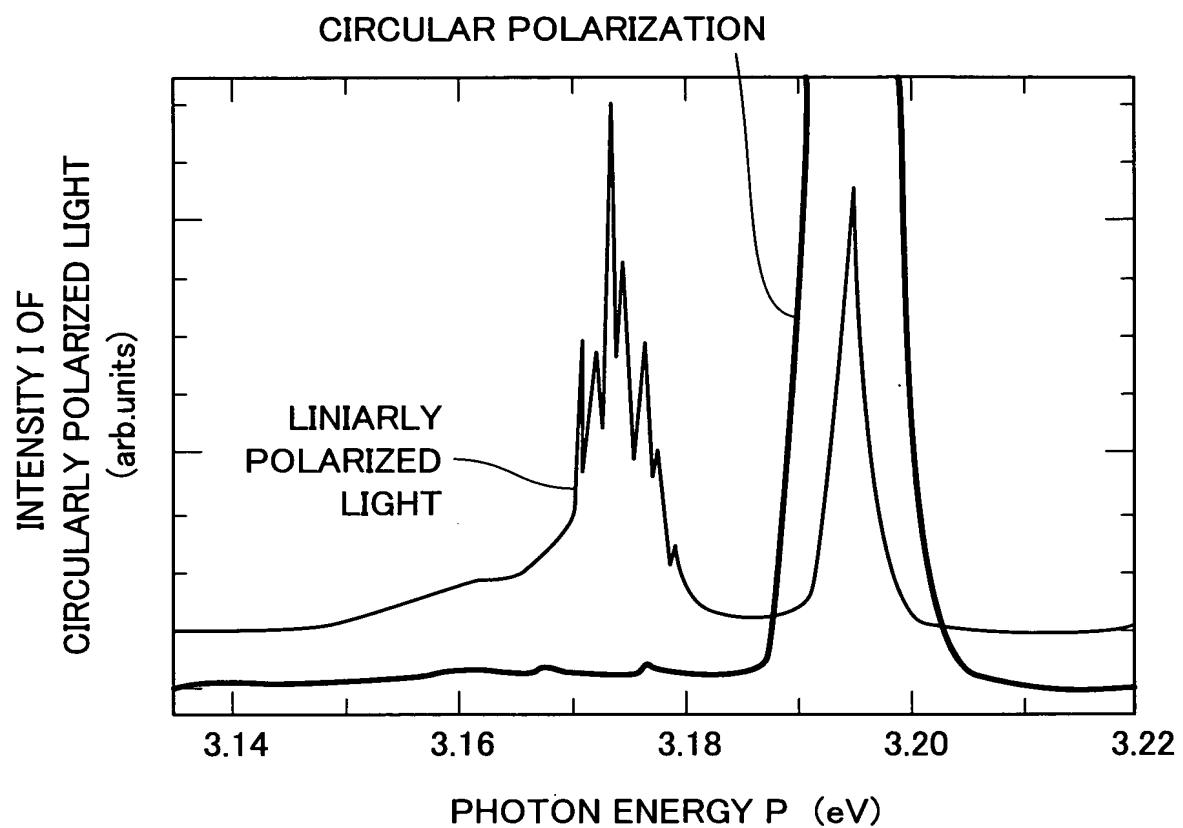
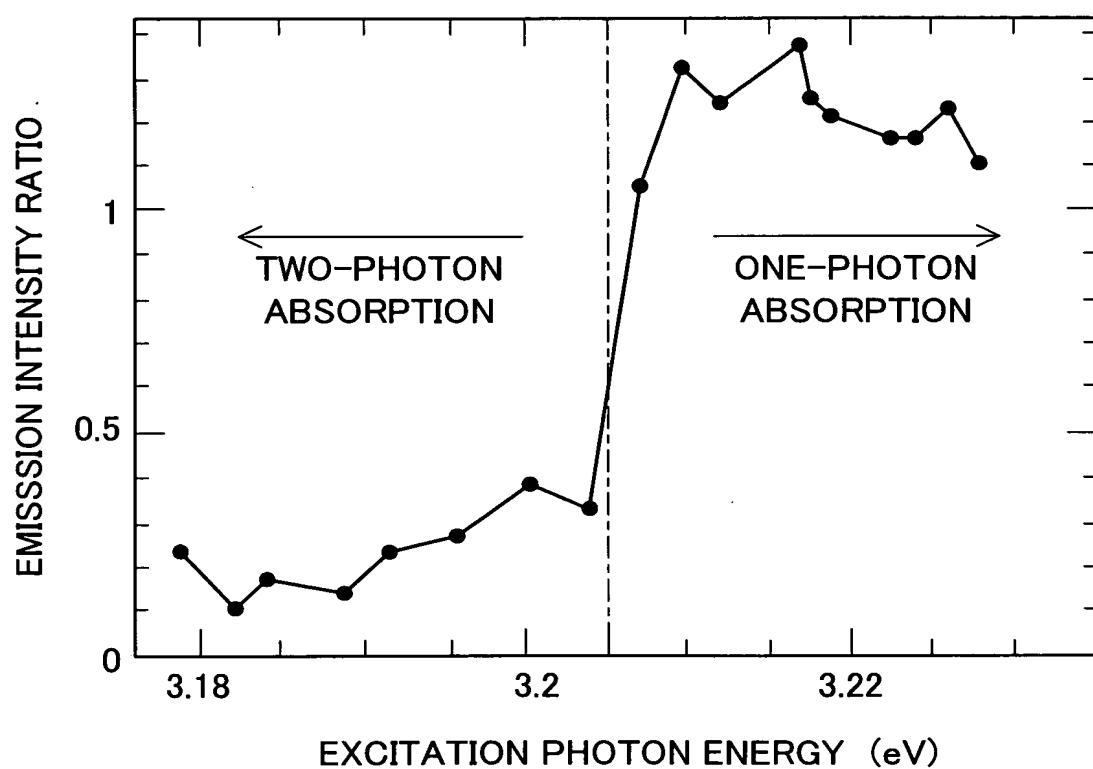


FIG. 11



F I G. 1 2

| | EXAMPLE | CONVENTIONAL ART |
|--|---|---|
| PHOTON ENERGY OF EXCITATION LASER LIGHT (WAVELENGTH OF EXCITATION LASER LIGHT) | 3. 1950eV (389nm) | 3. 68eV (337nm) |
| PULSE WIDTH OF EXCITATION LASER LIGHT | (1) PICOSECOND (1. 5ps) (2) FEMTOSECOND (200fs) | NANOSECOND (10ns/20ns) |
| EXCITATION MODE | TWO-PHOTON RESONANT EXCITATION OF BIEXCITONS | BAND-TO-BAND EXCITATION |
| RESONATOR | NaCl CLEAVED SURFACE | DIELECTRIC MIRROR |
| REFLECTANCE R OF RESONATOR | 5% | 90% |
| Q-FACTOR | 13, 400 | 128, 000 |
| LASING THRESHOLD VALUE I_{th} | (1) 67MW/cm ² (100 μ J/cm ²) (2) 7. 5MW/cm ² (1. 5 μ J/cm ²) | 2. 1MW/cm ² (21mJ/cm ²) |

FIG. 13

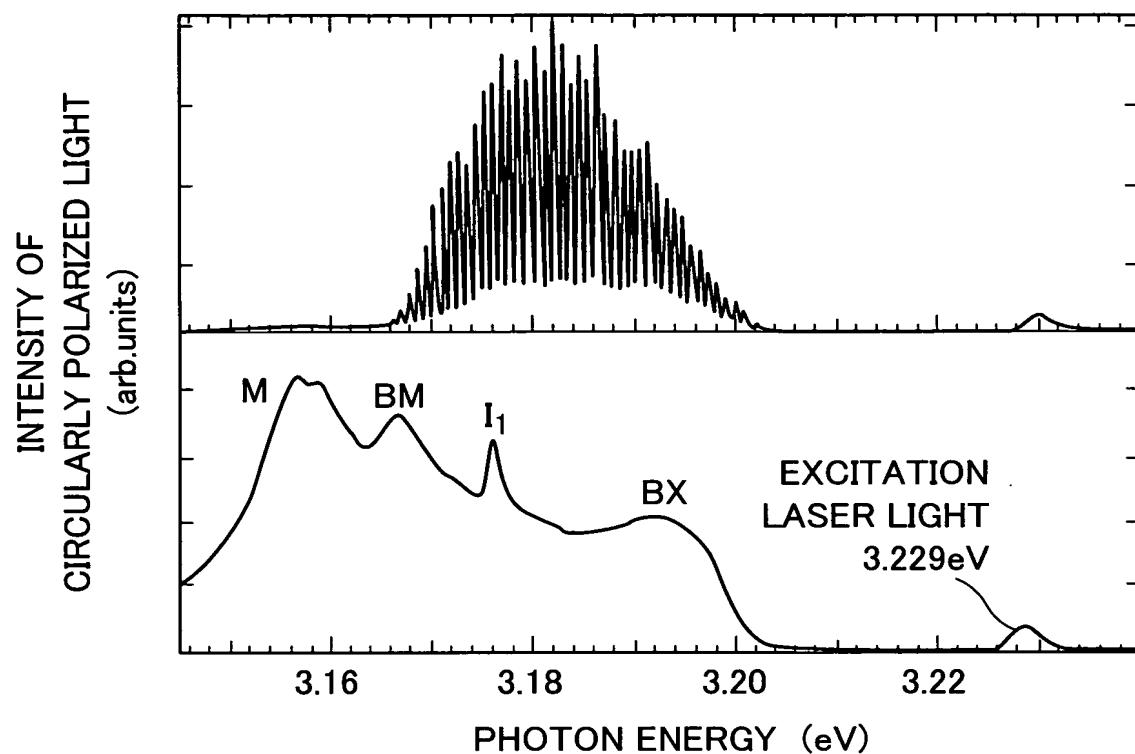
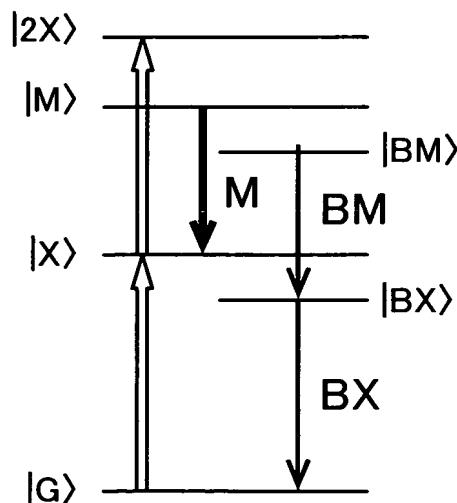


FIG. 14



| | | |
|----|---|-----------------|
| M | : | BIEXCITON |
| BM | : | BOUND BIEXCITON |
| X | : | EXCITON |
| BX | : | BOUND EXCITON |

FIG. 15 (a)

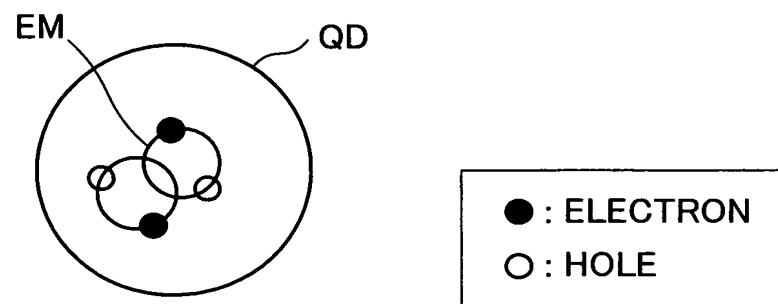
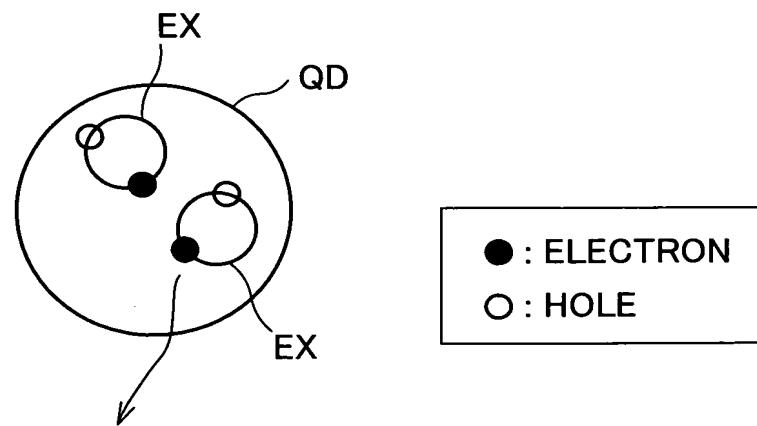


FIG. 15 (b)



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FIG. 16 (a)

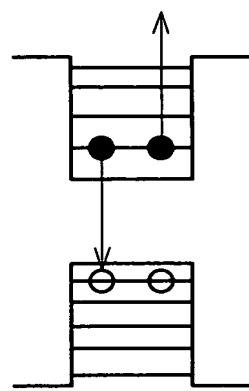
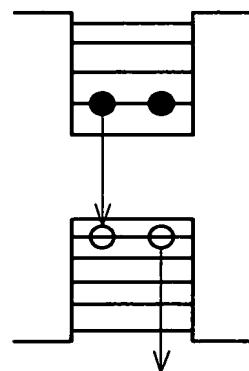
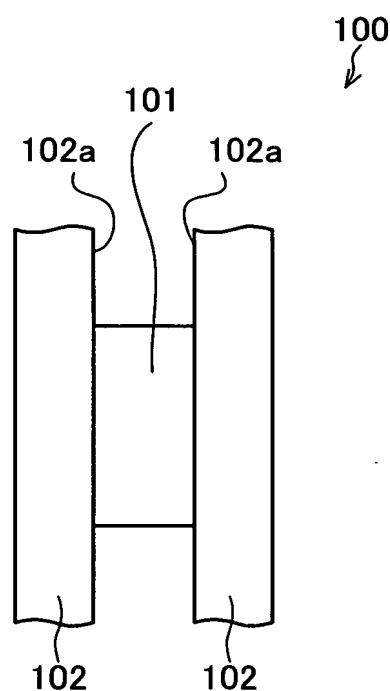


FIG. 16 (b)



F I G. 1 7



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FIG. 18

